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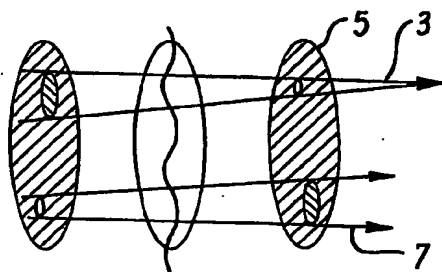


FIG. 1a

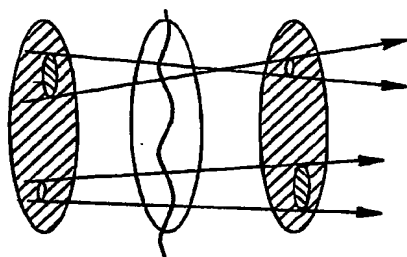


FIG. 1b

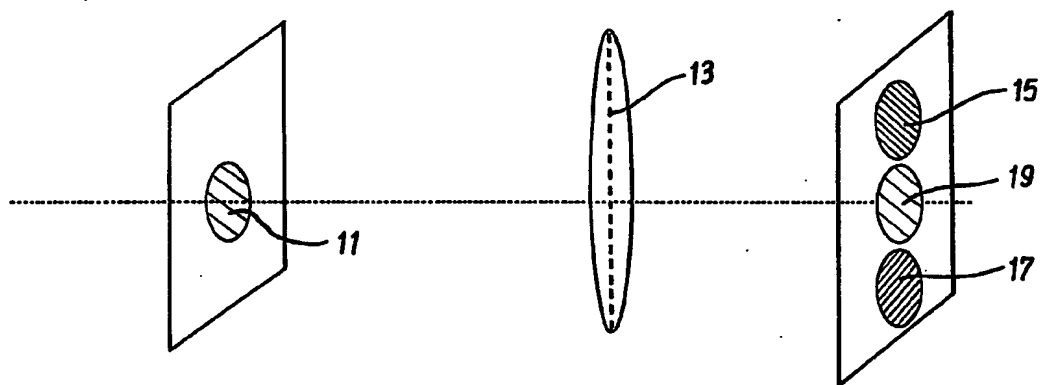
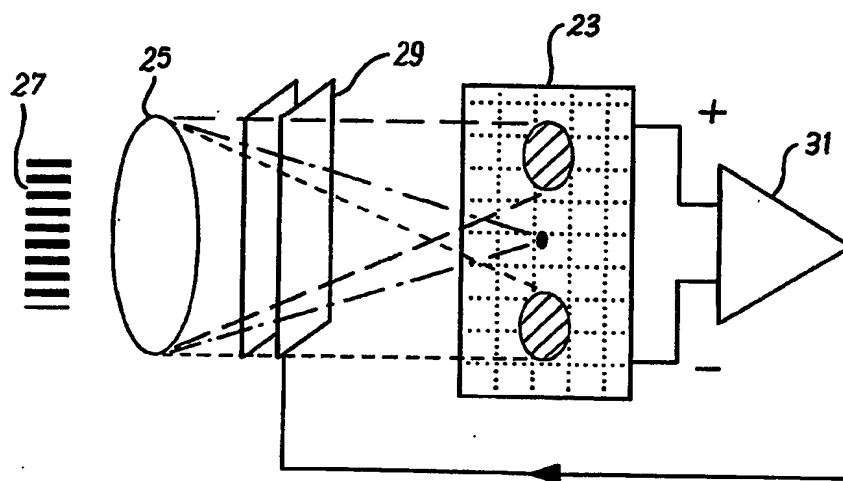


FIG. 2

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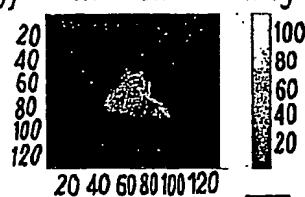
FIG. 3

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Original signal phase

**Fig. 4a**

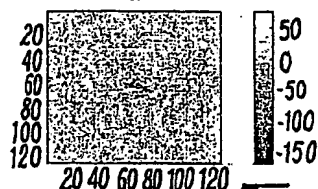
+1 diffraction order intensity

**Fig. 4b**

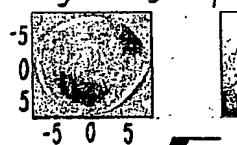
-1 diffraction order intensity

**Fig. 4c**

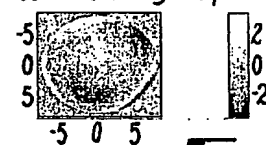
difference between +1 and -1 order intensity

**Fig. 4d**

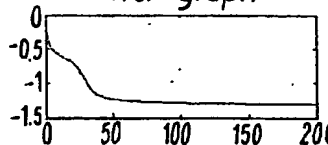
Original signal phase

**Fig. 9a**

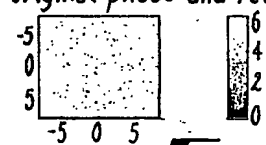
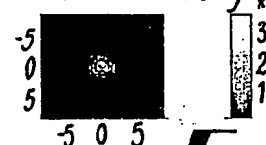
Retrieved signal phase

**Fig. 9b**

Error graph

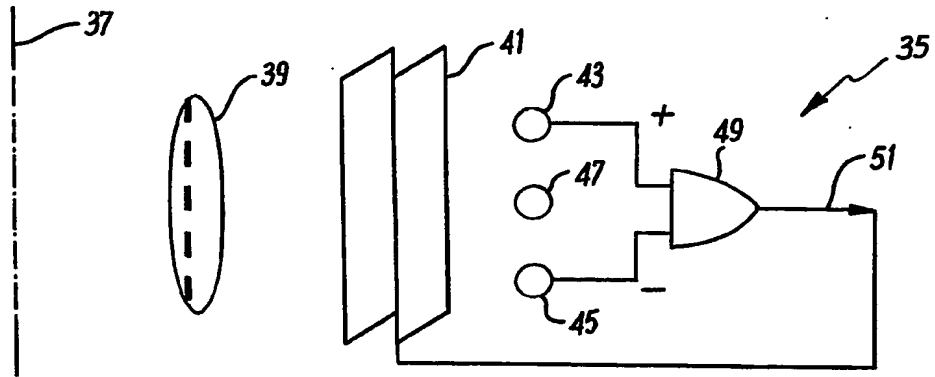
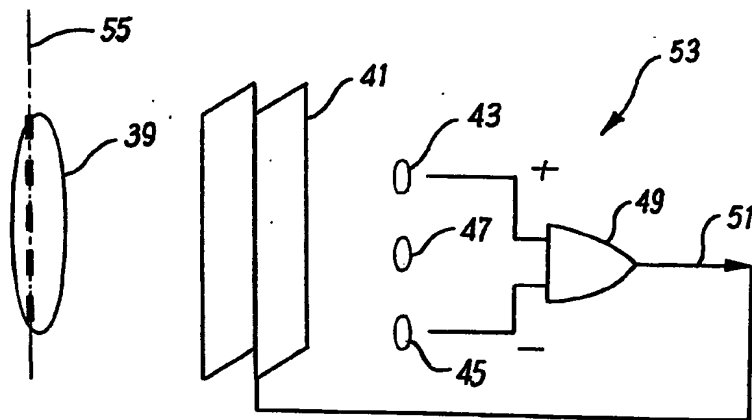
**Fig. 9c**

difference between original phase and retrieval phase

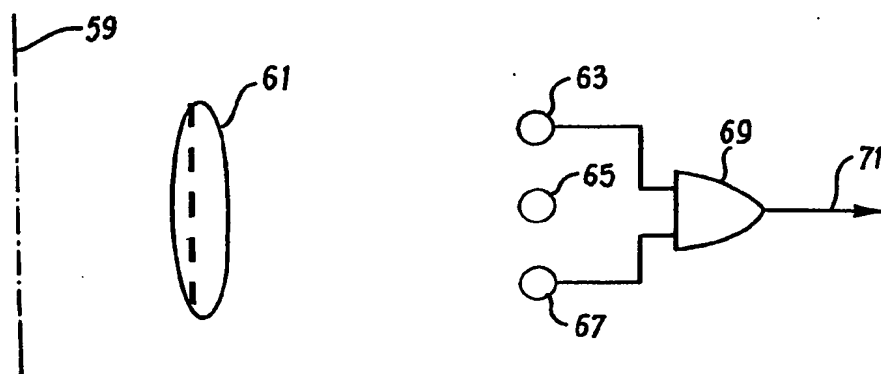
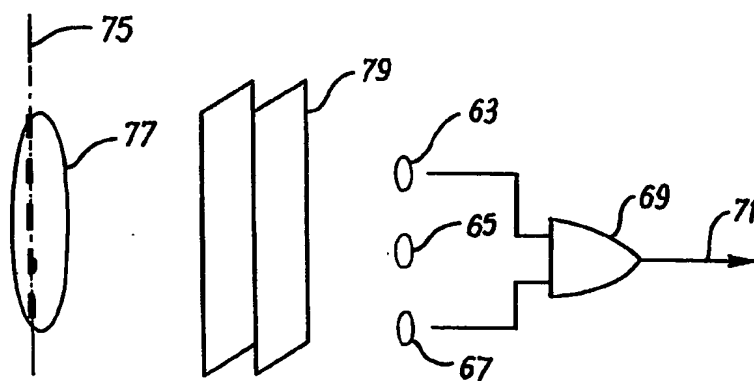
**Fig. 9d**+1 order intensity $\times 10^4$ **Fig. 9e**-1 order intensity $\times 10^4$ **Fig. 9f**

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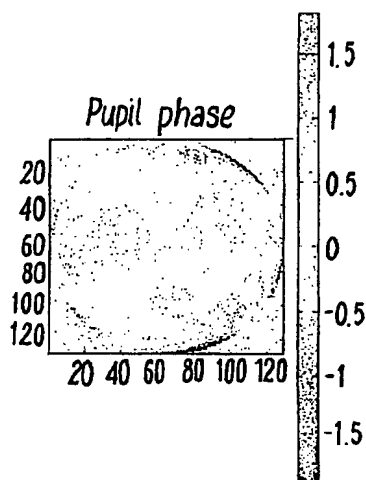
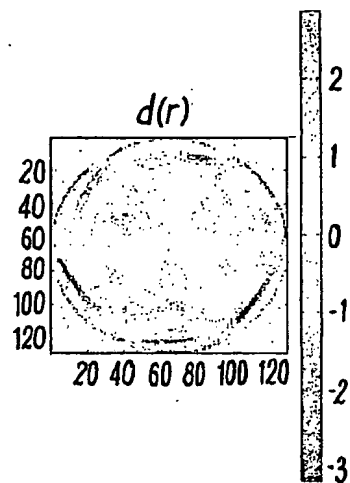
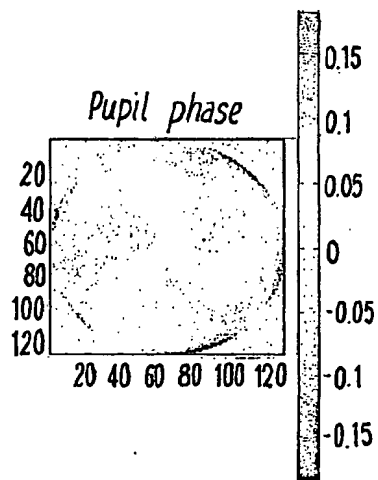
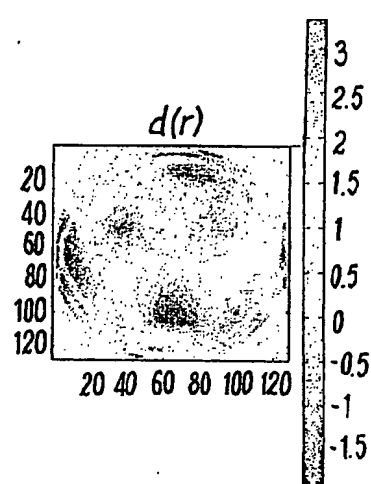
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**FIG. 5****FIG. 6**

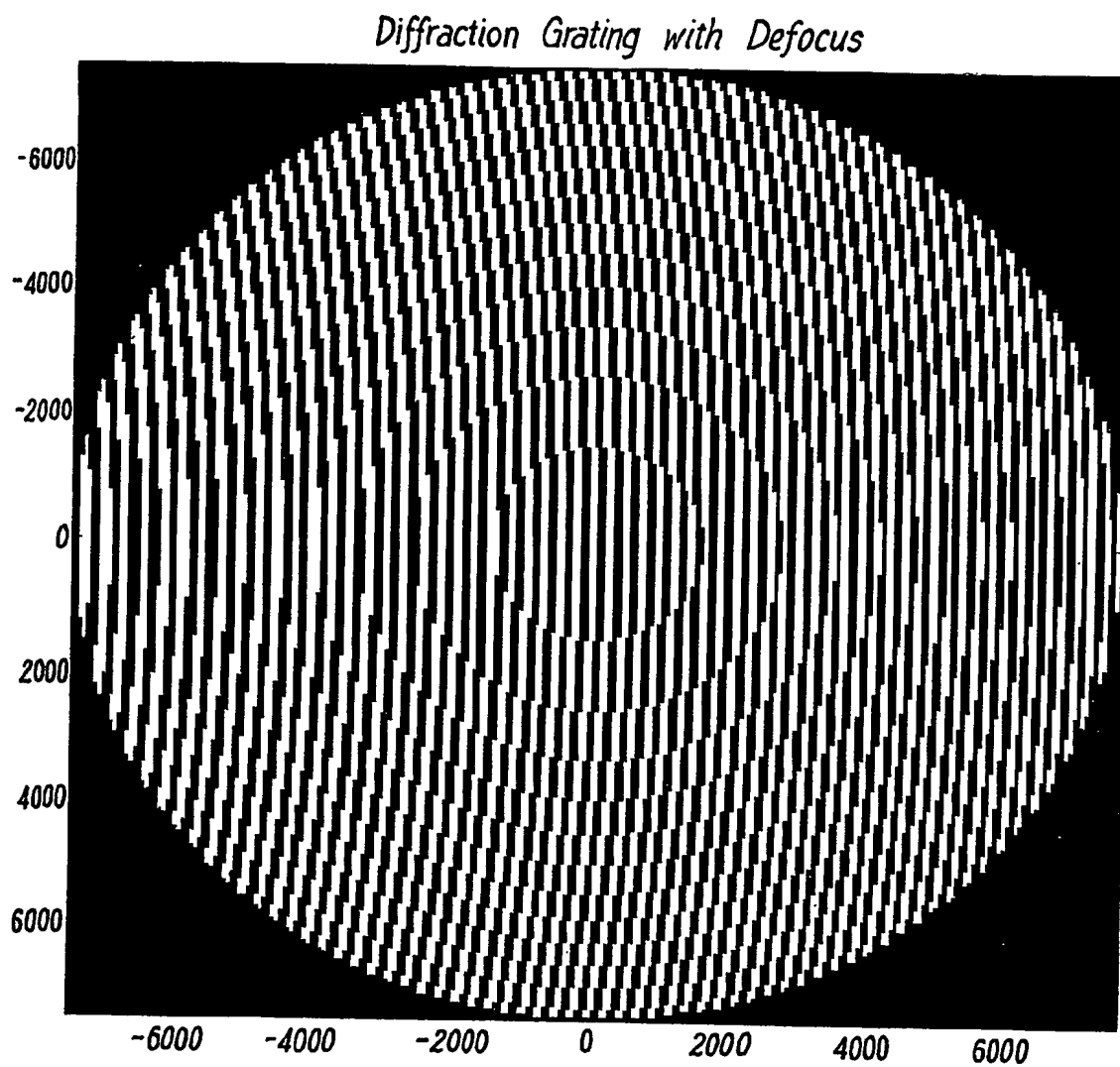
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**Fig. 7****Fig. 8**

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**FIG. 10(a)(i)****FIG. 10(a)(ii)****FIG. 10(b)(i)****FIG. 10(b)(ii)**

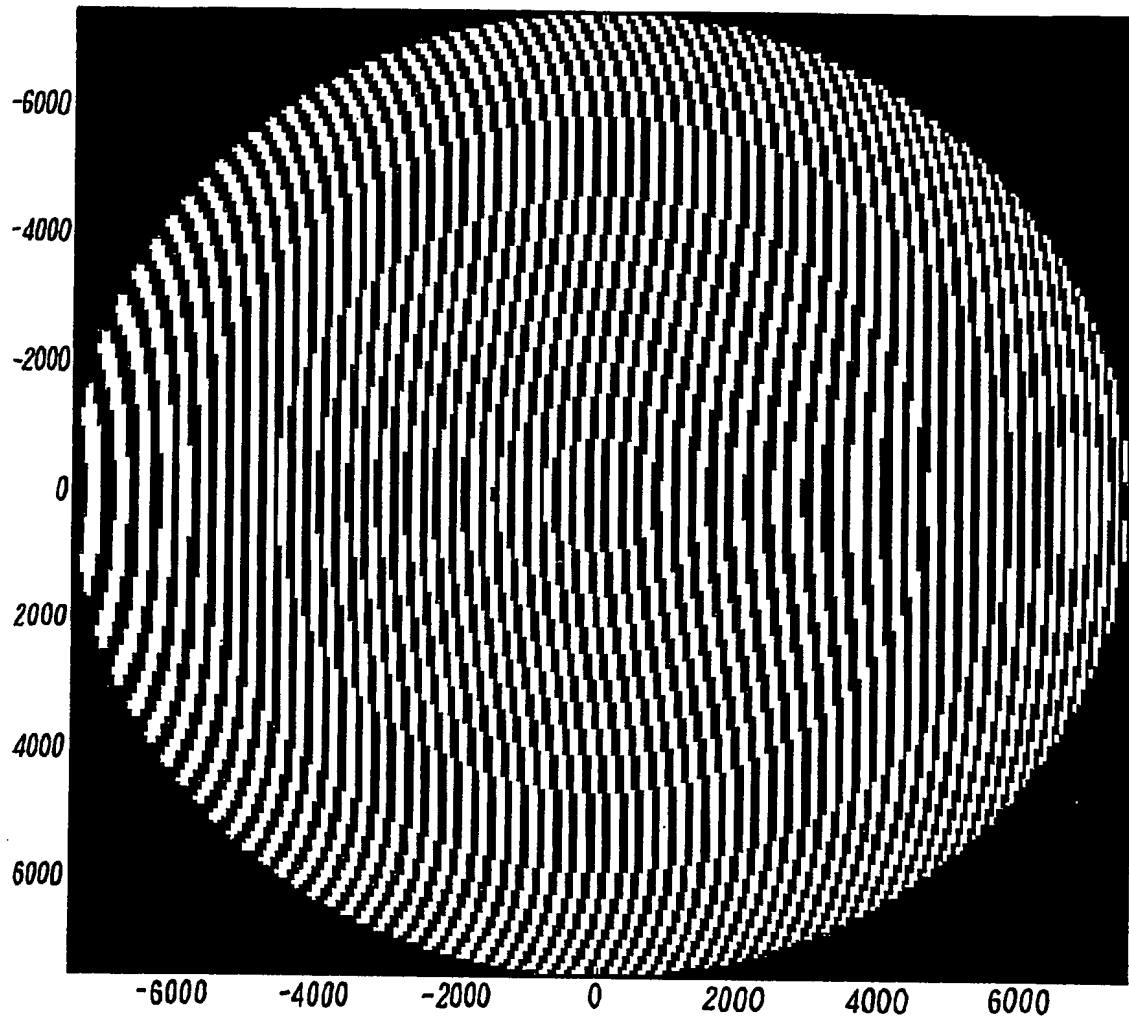
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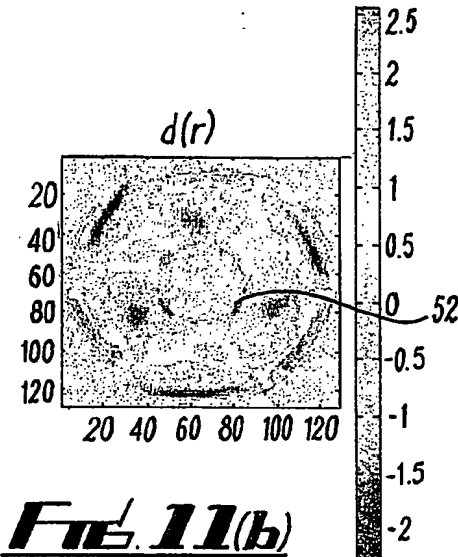
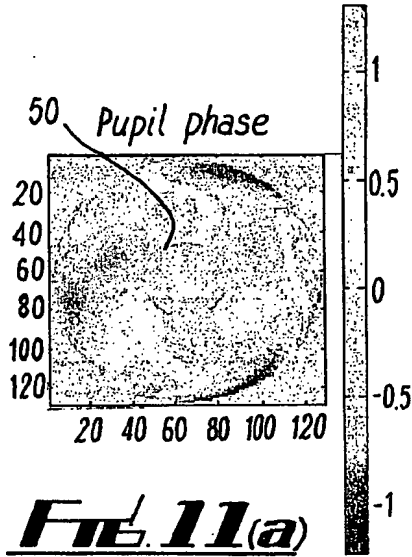
FIG. 10(a)(iii)

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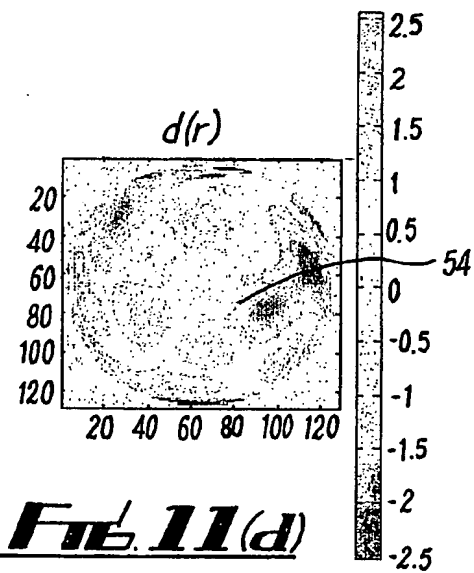
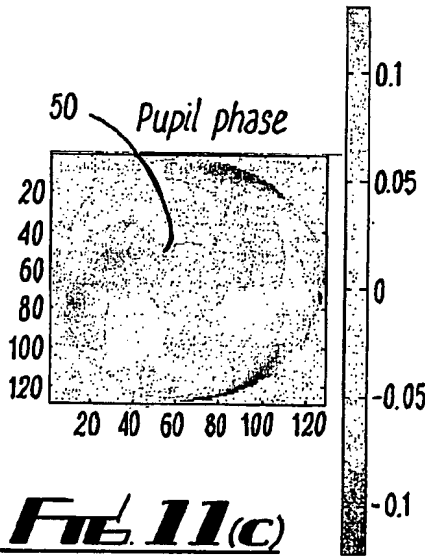
Diffraction Grating with Spherical Aberration***FIG. 10(b)(iii)***

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annular pupils
1) Defocus ($2 \cdot r^2$, circular pupil)



Spherical ($6 \cdot r^4$, annular pupil)



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